PROPOSED WELLS FOR ALBION-SHERIDAN TOWNSHIP LANDFILL - PHASE I

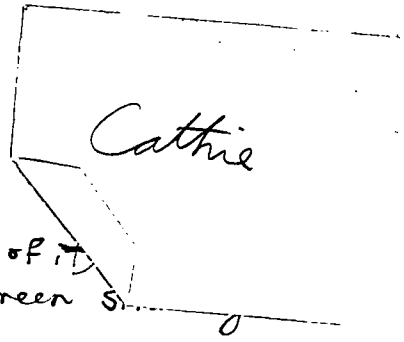
WELL LOCATION	WELL ID	SCREENED INTERVAL(ft)	DESCRIPTION OF SCREENED INTERVAL
MW-1	SG*	32.5-37.5	Approximately 2 feet below the water table.
	WB	54-59	Opposite zone of high conductivity identified during geophysical logging.
	SB*	67.5-72.5	In shallow bedrock.
MW-2	SG*	29-34	Approximately 2 feet below the water table.
	WB	48-53	Opposite zone of high conductivity identified in MWs-1, 3 & 4 during geophysical logging.
	SB*	60-65	In shallow bedrock.
MW-3	SG*	37-42	Approximately 8 feet below the water table in zone of higher conductivity with freons.
	WB*	54-59	Opposite zone of high conductivity identified during geophysical logging.
	SBA*	64.5-69.5	In shallow bedrock.
MW-4	SG	31.5-36.5	Approximately 2 feet below water table and opposite zone of higher conductivity observed during geophysical logging.
	WB*	56-61	Opposite zone of high conductivity identified during geophysical logging.
	SB*	68-73	In shallow bedrock.
	DB*	95-100	Approximately 20 feet below shallow bedrock well in which higher conductivity and low Eh were measured.
MW-5	SG*	23-28	Approximately 2 feet below the water table.
	SB*	70.5-75.5	In shallow bedrock.
MW-6	SG	23-28	Approximately 2 feet below the water table.
	WB*	46.5-51.5	Opposite zone of higher conductivity observed during vertical sampling and zone of higher conductivity observed in MW-4.
	SB*	70.5-75.5	In shallow bedrock.
MW-7	SG	***	Approximately 2 feet below the water table.
	WB	***	Opposite zone of higher conductivity observed during vertical sampling and zone of higher conductivity observed in MW-4.
	SB	***	In shallow bedrock.
MW-8	SG	31-36**	Approximately 2 feet below the water table.
	WB	47-52**	Set in stratigraphic zone in which higher conductivity was identified in MWs-1,3 & 4 during geophysical logging.
	SB	59-64**	In shallow bedrock with top approximately 10-15 feet below depth of auger refusal.
MW-9	SG	12-17**	Approximately 2 feet below the water table.
	WB	27-32**	Set in stratigraphic zone in which higher conductivity was identified in MWs-1,3 & 4 during geophysical logging.
	SB	39-44**	In shallow bedrock with top approximately 10-15 feet below depth of auger refusal.
MW-10	SG	3-6**	Approximately 2 feet below the water table.
MW-11	SG	3-6**	Approximately 2 feet below the water table.
MW-12	SG	3-6**	Approximately 2 feet below the water table.
MW-13	SG	3-6**	Approximately 2 feet below the water table.
LF-2		23-28**	Screen straddling water table, downgradient (southwest) of partially buried drums.(approx. N5950 E4760)
LF-3		25-35**	Boring in central portion of southern half of landfill. Screened only if water table lies above base of fill. (approx. N5500 E4600)

* Well is installed.
** Screened intervals estimated based on existing shallow bedrock wells and/or estimated depth of water table, actual depths subject to change.
*** Approval of well location by landowner pending, depth of screen can be estimated after location is selected.

PROPOSED WELLS FOR ALBION-SHERIDAN TOWNSHIP LANDFILL - PHASE I

WELL LOCATION	WELL ID	SCREENED INTERVAL(ft)	DESCRIPTION OF SCREENED INTERVAL
MW-1	SG*	32.5-37.5*	Approximately 2 feet below the water table.
	WB	54-59	Opposite zone of high conductivity identified during geophysical logging.
	SB*	67.5-72.5*	In shallow bedrock.
MW-2	SG*	29-34*	Approximately 2 feet below the water table.
	WB	48-53	Opposite zone of high conductivity identified in MWs-1, 3 & 4 during geophysical logging.
	SB*	60-65*	In shallow bedrock.
MW-3	SG	37-42	Approximately 8 feet below the water table in zone of higher conductivity with freons.
	WB	54-59	Opposite zone of high conductivity identified during geophysical logging.
	SBA*	64.5-69.5*	In shallow bedrock.
MW-4	SG	31.5-36.5	Approximately 2 feet below the water table and opposite zone of higher conductivity observed during geophysical logging.
	WB	56-61	Opposite zone of high conductivity identified during geophysical logging.
	SB*	68-73*	In shallow bedrock.
	DB**	95-100	Approximately 20 feet below shallow bedrock well in which higher conductivity and low Eh were measured.
MW-5	SG*	23-28	Approximately 2 feet below the water table.
	SB*	70.5-75.5	In shallow bedrock.
MW-6	SG	23-28	Approximately 2 feet below the water table.
	WB	46.5-51.5	Opposite zone of higher conductivity observed during vertical sampling and zone of higher conductivity observed in MW-4.
	SB*	70.5-75.5	In shallow bedrock.
MW-7	SG	17-22	Approximately 2 feet below the water table.
	WB		Benefit and depth of this well will be determined upon completion of additional wells at 6 initial well locations.
	SB		Benefit and depth of this well will be determined upon completion of additional wells at 6 initial well locations.
			WL = 37 WB = 47 BR = 55
MW-8	SG	31-36	Approximately 2 feet below the water table.
	WB	47-52	Set in stratigraphic zone in which higher conductivity was identified in MWs-1,3 & 4 during geophysical logging.
	SB	59-64	In shallow bedrock with top approximately 10-15 feet below depth of auger refusal.
			39-44' 53'-58' 65'-70'
MW-9	SG	12-17	Approximately 2 feet below the water table.
	WB	27-32	Set in stratigraphic zone in which higher conductivity was identified in MWs-1,3 & 4 during geophysical logging.
	SB	39-44	In shallow bedrock with top approximately 10-15 feet below depth of auger refusal.
MW-10	SG	3-6	Approximately 2 feet below the water table.
MW-11	SG	3-6	Approximately 2 feet below the water table.
MW-12	SG	3-6	Approximately 2 feet below the water table.
MW-13	SG	3-6	Approximately 2 feet below the water table.

CEC



50' S of crane in line with ridge (100' SW of it)

LF-2 'N5950+E4760 : Confirm fill or not - 5' screen SI

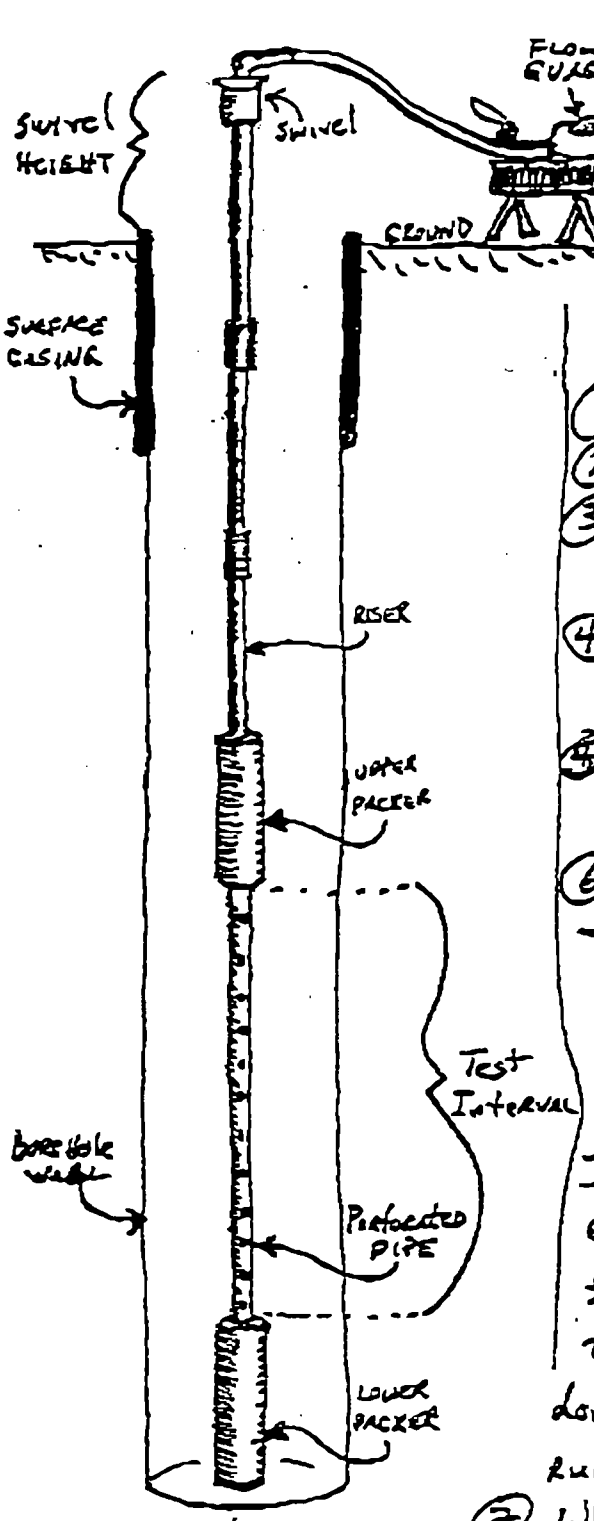
LF-3 : N5500+E4600 - As planned. 100' E of SM-2

* Well is installed.
** Well installation in progress.

PROPOSED WELLS FOR ALBION-SHERIDAN TOWNSHIP LANDFILL - PHASE I

WELL LOCATION	WELL ID	SCREENED INTERVAL(ft)	DESCRIPTION OF SCREENED INTERVAL
MW-1	SG*	32.5-37.5*	Approximately 2 feet below the water table.
	WB	54-59	Opposite zone of high conductivity identified during geophysical logging.
	SB*	67.5-72.5*	In shallow bedrock.
MW-2	SG*	29-34*	Approximately 2 feet below the water table.
	WB	48-53	Opposite zone of high conductivity identified in MWs-1, 3 & 4 during geophysical logging.
	SB*	60-65*	In shallow bedrock.
MW-3	SG	~~37-42~~ 39-44	Approximately 8 feet below the water table in zone of higher conductivity with freons.
	WB	54-59	Opposite zone of high conductivity identified during geophysical logging.
	SBA*	64.5-69.5*	In shallow bedrock.
MW-4	SG	31.5-36.5	Approximately 2 feet below the water table and opposite zone of higher conductivity observed during geophysical logging.
	WB	56-61	Opposite zone of high conductivity identified during geophysical logging.
	SB*	68-73*	In shallow bedrock.
	DB**	95-100	Approximately 20 feet below shallow bedrock well in which higher conductivity and low Eh were measured.
MW-5	SG*	23-28	Approximately 2 feet below the water table.
	SB*	70.5-75.5	In shallow bedrock.
MW-6	SG	23-28	Approximately 2 feet below the water table.
	WB	46~~-51~~	Opposite zone of higher conductivity observed during vertical sampling and zone of higher conductivity observed in MW-4.
	SB*	70.5-75.5	In shallow bedrock.
MW-7	SG	17-22	Approximately 2 feet below the water table.
	WB		Benefit and depth of this well will be determined upon completion of additional wells at 6 initial well locations.
	SB		Benefit and depth of this well will be determined upon completion of additional wells at 6 initial well locations.
MW-8	SG	31-36	Approximately 2 feet below the water table.
	WB	47-52	Set in stratigraphic zone in which higher conductivity was identified in MWs-1,3 & 4 during geophysical logging.
	SB	59-64	In shallow bedrock with top approximately 10-15 feet below depth of auger refusal.
MW-9	SG	12-17	Approximately 2 feet below the water table.
	WB	27-32	Set in stratigraphic zone in which higher conductivity was identified in MWs-1,3 & 4 during geophysical logging.
	SB	39-44	In shallow bedrock with top approximately 10-15 feet below depth of auger refusal.
MW-10	SG	3-6	Approximately 2 feet below the water table.
MW-11	SG	3-6	Approximately 2 feet below the water table.
MW-12	SG	3-6	Approximately 2 feet below the water table.
MW-13	SG	3-6	Approximately 2 feet below the water table.

* Well is installed.
** Well installation in progress.



Borehole Packer Permeability Test

1. Measure static water level in boring
2. Place apparatus in bottom of bore hole
3. Record test interval—Remember to allow for packer length.
4. Inflate packers to a pressure higher than max pumping pressure (80 to 100#).
5. Measure height above ground of flow gauge and swivel unit.
6. Run 3 tests under increasing pressures.
   - Water is pumped into formation at a constant pressure (15#) for 5 minutes. Use a watch to record the take (volume pumped) at each minute (5 measurements). If the recorded take is very erratic, extend the test for another 5 minutes. If fairly stable, increase pumping pressure to 30# and run the second test. When done, increase pump pressure to 45# and run the third test.
7. When tests are completed, deflate packers. Pull apparatus uphole to next contiguous interval and repeat steps (3) thru (7).

Notes: Make sure top of upper packer stays below base of surface casing. Put water level indicator in hole @ bottom of surface csg to detect "packer on base" of water. If this happens pull apparatus up 5 feet

PRESSURE TEST LOG

JOB NO. _____ BORING NO. _____ TEST NO. _____

DATE _____ TECHNICIAN _____

DEPTH OF BORING _____ BORE HOLE SIZE _____ WATER LEVEL _____

PACKER INFLATION PRESSURE _____ PSIG LENGTH OF PACKER _____

DEPTH TO BOTTOM OF UPPER PACKER _____ DEPTH TO TOP OF LOWER PACKER _____

LENGTH OF TEST SECTION _____ DISTANCE PRESSURE GAUGE IS ABOVE GROUND _____

HEIGHT OF WATER SWIVEL ABOVE GROUND _____ MATERIAL BEING TESTED _____

TEST DATA:

WATER METER READINGS (ft^3)	PRESSURE of TEST (PSIG)	TIME LAPSE (MIN)	WATER TAKE (ft^3)	FLOW RATE (ft^3/min)	WATER METER READINGS (ft^3)	TEST PRESSURE (PSIG)	TIME LAPSE (MIN)	WATER TAKE (ft^3)	FLOW RATE (ft^3/min)